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03018137.4 - 2214 PCT/

Applicant/Proprietor
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COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report (under R. 44 or R. 45 EPC) for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

- Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division :

Abstract Title

The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract : 4A

Refund of search fee

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 03 01 8137

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 071 718 A (HARDEN ET AL) 31 January 1978 (1978-01-31)	1,3, 5-10,12, 13,15, 16,18	H01H13/70 H01H13/48
Y	* column 2, line 40 - column 3, line 49; figures 1-3 *	2,4,11, 14,17, 19-26	
X	----- EP 0 801 517 A (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD) 15 October 1997 (1997-10-15)	1-12,15, 18	
Y	* claims 1-3,7; figures 6,8-10 * * page 6, lines 25-30 * * page 7, lines 9-32 *	13,14, 16,17, 19-26	
X	----- EP 0 444 914 A (LUCAS INDUSTRIES PUBLIC LIMITED COMPANY) 4 September 1991 (1991-09-04)	1-12,15, 18,23-25	
Y	* the whole document *	13,14, 16,17, 19-22,26	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Y	----- US 4 323 740 A (BALASH ET AL) 6 April 1982 (1982-04-06)	1-18, 23-25	H01H
Y	* the whole document *		
Y	----- US 4 163 138 A (HARDEN, PHILLIP L) 31 July 1979 (1979-07-31)	1-18	
Y	* the whole document *		
Y	----- EP 1 035 557 A (SEIKO PRECISION INC) 13 September 2000 (2000-09-13)	1-18	
	* abstract; figure 14 *		

		-/-	
The present search report has been drawn up for all claims			
3	Place of search	Date of completion of the search	Examiner
	The Hague	14 October 2005	Desmet, W
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



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EUROPEAN SEARCH REPORT

Application Number

EP 03 01 8137

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
7	Y US 4 349 708 A (ASHER ET AL) 14 September 1982 (1982-09-14) * abstract; figures *	19-22,26	
8	Y US 2001/006143 A1 (SATO TAKESHI) 5 July 2001 (2001-07-05) * abstract; figures *	19-22,26	
9 <i>IDS</i> <i>(消)</i>	Y,D PATENT ABSTRACTS OF JAPAN vol. 2000, no. 02, 29 February 2000 (2000-02-29) & JP 11 331329 A (FUJITSU LTD), 30 November 1999 (1999-11-30) * abstract *	19-22,26	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
3	The present search report has been drawn up for all claims		
Place of search	Date of completion of the search	Examiner	
The Hague	14 October 2005	Desmet, W	
CATEGORY OF CITED DOCUMENTS			
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 03 01 8137

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-10-2005

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
✓ US 4071718	A	31-01-1978	CA DE FR GB JP JP	1078901 A1 2747425 A1 2368363 A1 1536079 A 58008816 U 53053785 A	03-06-1980 27-04-1978 19-05-1978 20-12-1978 20-01-1983 16-05-1978
✓ EP 0801517	A	15-10-1997	NONE		
✓ EP 0444914	A	04-09-1991	CA JP US	2036825 A1 6111681 A 5193669 A	29-08-1991 22-04-1994 16-03-1993
✓ US 4323740	A	06-04-1982	BE CA DE FR GB JP	887349 A1 1179749 A1 3103768 A1 2475288 A1 2068643 A 56123629 A	01-06-1981 18-12-1984 28-01-1982 07-08-1981 12-08-1981 28-09-1981
✓ US 4163138	A	31-07-1979	NONE		
✓ EP 1035557	A	13-09-2000	CN US	1274167 A 6373008 B1	22-11-2000 16-04-2002
✓ US 4349708	A	14-09-1982	DE EP JP JP JP	3063325 D1 0024813 A1 1594054 C 2008408 B 56035320 A	07-07-1983 11-03-1981 14-12-1990 23-02-1990 08-04-1981
✓ US 2001006143	A1	05-07-2001	JP	2001185005 A	06-07-2001
✓ JP 11331329	A	30-11-1999	NONE		



ABSTRACT / ZUSAMMENFASSUNG / ABREGE

03018137.4

A switch sheet (1) and switch (200) utilizing the switch sheet are provided, wherein the switch sheet utilizes a dome shaped spring (2), and is structured such that the dome shaped spring (2) can be definitely clicked in the center part and operate effectively even when the dome shaped spring (2) is miniaturized. In addition to having long-lasting, superior durability, this switch sheet provides an improved click ratio enabling miniature devices with a good clicking sensation to be achieved. This switch sheet comprises a dome shaped spring (2), resin sheeting (4) adhered to the external surface of this dome shaped spring (2) via an adhesive agent (3), and a rigid member (9) positioned on the outside of this resin sheeting, having a downward facing protrusion part (10) formed to oppose the center part of said dome shaped spring (2).